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ABSTRACT

Existing uses of assessment data obtained from the Jordanian General Secondary Education Certificate Examination (GSECE) are critically examined. The failure to fully realize potential uses of data is explored and explained in light of the existing testing technology and the associated level of expertise. A short description of the GSECE history, philosophy and testing structure together with an outline of its explicit and implicit objectives are provided. The role of the GSECE as an admission instrument for higher education within the country versus its role as an end-of-schooling certificate tool is one major controversy that is highlighted in the paper. The inappropriate uses of GSECE scores as the criterion for admission to higher education in Jordan is discussed. The possible impacts that competition with others for higher education outside the country might have on Jordanian educational decisions concerning the testing structure, score levels and passing percentages on GSECE are explored. The paper outlines a number of interrelated issues, such as test-bias, equity and accountability, along with many others pertaining to the internal evaluation of the education system and its wider implications for the welfare of the country. (Author/LMO)

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Assessment Data Obtained From The Jordanian GSECE: A Critical Look

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Abstract

Existing uses of assessment data obtained from the Jordanian General Secondary Education Certificate Examination (GSECE) were critically examined . The failure to fully realize potential uses of data was explored and explained in light of the exsisting testing technology and the associated level of expertise . Two major sources of information were consulted for this purpose . These were the Jordanian Ministry of Education files and publications and the minutes for the two-year prolonged meetings of the committee for the Development of School and Public Examinations in Jordan together with the technical report prepared by the committee .

A short description of the GSECE history, philosophy and testing structure together with an outline of its explicit and implicit objectives were provided. The role of the GSECE as an admission instrument for higher education within the country versus its role as an end of schooling certificate tool is one major controversy that is highlighted in the paper . A related factor to that, which was discussed in the paper, is the cultural overemphasis on higher education, particularly in a limited number of fields. That Such an overemphasis might have led to a shift in the role of GSECE, perhaps at the expense of desirable stuctural changes is a possibility which was probed .

The inappropriate uses of GSECE scores as the criterion for admission to higher education in Jordan was documented empirically . The possible impacts that competition with others for higher education outside the country might have on Jordanian educational decisions concerning the testing strcture, score levels and passing percentages on GSECE were explored .

The paper outlined a host of interrelated issues which may not have been considered previously such as test-bias, equity and accountability along with many others pertaining to the internal evaluation of the education system and its wider implications for the welfare of the country .

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ASSESSMENT DATA OBTAINED FROM THE JORDANIAN GSECE : A CRITICAL LOOK

Historical Background :

The Jordanian General Secondary Education Certificate Examination is the oldest among all public examinations in Jordan. Starting the school year 1933/34 the exam was given for the first time to students graduating from secondary schools. The number of students who passed the exam in that year was eleven. According to regulations at that time, the exam was given once annually, everyone who finished the tenth grade was eligible to sit for the exam, answers to the test items have to be in Arabic with some exceptions when necessary, and those who do not pass one subject or more have to sit for the whole exam next year. Regulations pinpointed compulsory and elective subjects that comprise the exam and set the passing score to be 60. The Ministry of Education continued to administer the exam in the mid of July each year until the school year 1959/1960 when it was stopped. (Al-tel, 1979; Ministry of Education, 1977, 1980).

In the school year 1960/1961 the third secondary grade was added to the secondary cycle to increase the number of school years to twelve instead of eleven. In 1961/1962 the Jordanian General Secondary Education Certificate Examination (GSECE) was introduced to replace the old one, and the Ministry

continued to administer it each year until now. With the exception that the exam is now administered at the end of both school semesters with equal weights for each, other changes that have taken place since the exam was introduced are minor. (Bashireh et.al., 1984; Ministry of Education, 1977, 1980).

Philosophy and Objectives :

Inspection of the Ministry of Education documents and publications does not reveal either the standing philosophy behind public examinations in Jordan or the guiding objectives for these examinations. Apart from what the articles 55, 56, and 58 of the Law of Education number 16 for the year 1964 state with regard to public examinations, available literature concerning their philosophy and objectives hardly exists. Article 56 of the Law of Education states that "The Ministry of Education conducts a general exam at the end of the secondary cycle where passers are offered a certificate called the General Certificate for Secondary Education. Organization of the exam and conditions to issue the certificate will be arranged via by laws issued by the Ministry." Article 58 states that "The Ministry of Education should upgrade public exams in order to be valid and reliable for the measurement of students achievements and proficiencies." (Ministry of Education, 1971). Hence public exams according to article 58

aim at the measurement of students achievement and proficiencies in order, perhaps, to award them a general end of schooling certificate. It could be argued here that since schooling is a public endeavour financed by public money mostly to achieve a set of goals and objectives considered crucial by the public, then public examinations are inevitable tools to check for the minimum attainment of these goals and objectives.

Prior to the school year 1957/58 passers on the GSECE were grouped into two categories. Category "A" for those with averages above 70, and Category "B" for those with averages below 70. Category "A" passers certificate was distinguished by the statement "his scores qualify him to pursue university education." (Bashireh et.al., 1984). This might help crystalize some of the hidden intentions of educational policy-makers who were behind the first introduction of the exam. Though qualifying for university education may sound different from measuring students achievements and proficiencies, the two purposes are compatible if the conventional assertion that the best predictor for later achievement is previous achievement, holds true.

In three of the prolonged meetings of the Committee for the Development of Public and School Examinations (CDPSE) the philosophy and objectives for GSECE were the table issues*.

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* The author is a member of the Committee for the Development of Public and School Examinations.

Five of the ten member committee were directors of major departments in the Ministry including the Department of Public and School Examinations (DPSE). The Under Secretary of the Ministry of Education took part in the three meetings. Two major questions were asked repeatedly : Is there a philosophy that stands behind GSECE ? And if so, what are the objectives for such an exam that emerge from such philosophy ? Unfortunately the 6-8 hours of discussion and loud thinking did not yield any defendable answers for the two questions. Many competitive arguments were driven. One group spoke of the need for the exam as a quality control mechanism and concomitently as a screening device for higher education, while a second group supported the argument that the exam is necessary as an end of schooling summative tool to ascertain the attainment of educational goals and objectives. A third group argued that a close critical evaluation for the types of behaviors tapped by the exam does not support either argument. Evaluation of the exam suggests that the exam measures only a small segment of the cognitive outcomes specific to cognitive objectives in the third secondary class. Therefore it slightly represents educational goals and objectives which presumably anticipate cognitive, affective and psychomotor learning, and inadequate as a screening device for higher education since aptitudes and interests of students are not measured by the exam.(Ministry of Education, 1982).

It can be said with little reservation that the practice of giving GSECE by the Ministry of Education in the last fifty years has become a ritualised habit. One of the overriding factors behind such a practice, perhaps, is to sustain the influence and power of the Ministry. In the absence of other admission-measures to higher education in the country why should the Ministry give up the prerogative of housing the test that would determine who would or would not enjoy the university setting.

Structure and Operation :

GSECE is an achievement test constructed, administered, scored and reported by the Ministry of Education. DPSE carries all the activities pertinent to the exam. These activities include setting the testing schedules, selecting item-writers, giving serial numbers to examinees, reproducing tests and packing them, selecting test graders, supervising grading, calculating grades, issuing transcripts and issuing certificates to those who pass. (Bashiren et.al., 1984). The test is a paper and pencil one. Items measure students achievement in subject matters taught in the 12th grade. Until recently, the dominant item format used was the essay type. Objective items are increasingly being used.

The number of test papers varies from 8 - 11 depending on the stream in secondary education. Eight streams for secondary education are available in Jordan and a separate GSECE is given to each stream. By-laws specify who is eligible to sit for the exam in each stream, the weight given to different subject matters, passing criteria and formulas on which computing examinees averages in each stream are based.

All the activities comprising the construction, administration, grading and reporting GSECE are done manually. Thousands of the Ministry personnel engage twice a year in these activities. Three years have passed since the Ministry purchased a huge scoring machine that would presumably handle scoring and reporting public exams. Unfortunately, the machine has not been used yet. It can be said without being mistaken that the human infrastructure needed to introduce a technological shift to handle Jordanian public exams is not yet available. CDPSE had pleaded frequently for the introduction of some major changes in the practices of constructing, grading and reporting public exams. The plea was always blocked by the level of available testing expertise in the country on the one hand and by public testing structures and practices in the neighbouring Arab Countries on the other. CDPSE recommended for instance the use of standard scores rather than raw scores in ranking students in order to achieve equality.

The recommendation was turned down because it could not be handled by the Ministry personnel. CDPSE recommended the construction of a large pool of objective items that could be pre-tested and used continuously without the tedious engagement in item writing each semester, but the recommendation was turned down because of consequent sampling difficulties. CDPSE recommended an exam that would either measure achievement in the three secondary grades or measure aptitudes necessary for higher education, but the recommendation was turned down due to lack of compatability with testing-schemes in the neighbouring Arab Countries.

Uses of GSECE Data :

GSECE has been given for fifty years without a directive philosophy or a guiding set of objectives. Through the years new roles for GSECE have emerged and others have disappeared. Prior to 1957 passing GSECE was a salient requirement for those who seek jobs with the government. School teachers were recruited from holders of a passing certificate. Quantity pressures were tremendous and the need for teachers was very urgent. With the exception of one teacher training institute, institutions for higher education did not exist in the country. Therefore, a secondary education certificate was considered as a tentative substitute for a teaching certificate. After all there was no other alternative. It was mentioned previously

that passers of GSECE were classified into two categories. Those of Category "A" were described as qualified to pursue university education. It can be stated with confidence that most of those were sent on scholarships to universities outside Jordan.

In 1962 Jordan University was the first University to be established in the country. The role of GSECE scores as an admission criteria to university education had strengthened and gained momentum. Public concern with GSECE scores started to grow since getting higher grades on the test was the only possible avenue to university education and at the same time a precondition for a scholarship from the Ministry of Education. This role for GSECE was probably reinforced by admission policies in the neighbouring Arab Universities, where demand for university education was far exceeding available capacity. In the absence of other criteria these universities found themselves obliged to rely heavily on GSECE scores.

Yarmouk University was established in the school year 1976/1977. Together with Jordan University they offer a wide spectrum of university education majors. However, due to high cost and limited resources admission to certain majors has to be restricted. Hence a new role for GSECE scores as a placement tool has emerged. Those with higher scores can join faculties

of medicine and engineering where space is limited and demand is high. Those with lower scores can join the remaining faculties.

Scholarships in Jordan are offered by different bodies in the country. These include the Ministry of Education, the Ministry of Defense and some private agencies. Though selection criteria vary, the common core of all sums down to students scores on GSECE. There is no other competing device whether the scholarship is for a training course in a foreign language or a workshop in road building.

Are (GSECE) Scores Good Predictors for Success at the University ?

A number of studies have tried to evaluate the role of GSECE scores as admission and placement criteria to university education in Jordan. Both recent and previous findings have not been able to lend support to such a role. Al-tel (1972) found a 0.22 - 0.49 zero order correlations between students GSECE average scores and their cumulative averages at Jordan University. Billeh et al., (1974) used students first year at the university cumulative average and their four years cumulative average as two criteria to be predicted individually by their GSECE average scores with the combination of their individual subject matter scores comprising that average. Using multiple

regression analysis they had found that 13 - 30% of the variance in each criterion measure were explained by the predictors.

Darwazeh (1978) evaluated the predictive validity for GSECE scores. Graduates from different university majors covering a five year period were taken as a sample. Predictors were average GSECE scores, scores for individual subject matters on GSECE relevant to graduates majors, students first year at the university cumulative average and students first year major cumulative averages. Two criterion measures were used; students four year major cumulative averages and their overall four years cumulative averages. She had found a number of insignificant relationships between predictors and criteria. In the case of a significant relationship predictors explained between 1 - 65% of variance in each criterion. Magnitudes of these percentages compared to Al-tal findings could be due to the use of students first year university scores.

A recent case study by Jaradat et. al. (1984) evaluated the use of GSECE scores as criteria for admission and placement at Yarmouk University. A sample of about (1000) graduates following eight different majors in three major faculties at the university for four consecutive years were taken. Twelve regression equations were fitted to fulfill the objectives of the study. It was found that GSECE averages and the comprising individual subject matter scores were poor predictors for

university success defined by the graduate cumulative average. In seven of the equations explained variance in student university cumulative averages did not differ from zero and in the remaining five the maximum proportion of variance explained did not exceed 20%. The study concluded that the well-known assertion "achievement is the best predictor for achievement" does not hold in the case of Yarmouk University.

A study by Al-Waqfi (1981) critically evaluated the content validity for GSECE in addition to its predictive validity. A contrastive evaluation with teacher made tests for the third secondary grades with regard to content and predictive validities was made. Al-Waqfi concluded that GSECE items for different subject matters do not represent any better the anticipated learning in these subjects than teacher made tests do. Similarly GSECE scores did not provide better predictors for students university grades than scores on teacher made tests. The study questioned the two presumed objectives for GSECE as a summative evaluation tool and as an admission criterion for higher education.

It can be concluded from the emperical evidences outlined in the preceding paragraphs that an overemphasis was placed on the role of GSECE scores as admission criteria to higher education. Such a role has been reinforced over the years due, perhaps, to two interrelated factors; the high competition

for higher education and the absence of an alternative measure for admission to the university. The plea for an admission policy to higher education has been voiced eloquently by concerned educators in Jordan. Such a policy, they believe, has to invest students aptitudes, abilities, interests and achievement in training man-power needed for realizing the country economic and social development objectives. Actualization of this policy is handicapped, perhaps, by the lack of expertise on the one hand and by the absence of coordination between Jordanian Universities on the other. The author of this paper believes strongly in the immediate need for an admission and placement policy to Jordanian Universities. The widening divorce between what is taught at schools and what is taught at the university dictates the need for the use of appropriate measures for university education admission. The continuous unwarranted reliance on GSECE scores as admission criteria aggravates dissatisfaction with the quality of university education and the misallocation of limited resources.

It sounds acceptable to use GSECE for the purpose of certifying that minimum competencies are acquired by secondary school graduates, but it is extremely invalid to use such an exam for a completely different purpose. Overwhelming evidence against the use of GSECE scores as admission criteria to higher education in Jordan demonstrates the case

of violating the simple general conception of a test validity. A test is valid to the extent it fulfills its purpose. Without precautions, GSECE is not adequately fulfilling the purpose of admitting Jordanians to higher education in the country.

A major pertinent issue that has consequences on admission to university education is the wide variations in students GSECE performances. Scores variation may be the outcome of the interplay of a host of interrelated factors. Some of these factors deserve special attention. Jordan is divided into nineteen school districts where an Office of Education is running day to day activities. Summary descriptive statistics for the district students performances on GSECE are made available each year. Means, medians, standard deviations and passing percentages are calculated for each subject matter in the exam. Statistics show that differences in means, medians and passing percentages range between 6 - 25, 6 - 28, and 9 - 27 for the literary stream and 7 - 29, 6 - 36, and 5 - 23, for the science stream respectively. This presents, perhaps, a form of test bias that is not possible at this time to be documented systematically.

Two salient factors are possibly responsible for wide variations in students performances; variations in teachers competencies and variations in students socioeconomic status from a school district to another. Better qualified and

experienced teachers are usually assigned for city secondary schools where those with less qualifications and experiences are sent to remote areas and villages. Consequently student learning is affected by the inadequacy of teacher placement. Parent of high socioeconomic status who can afford hiring a private tutor for their son or daughter do not hesitate to do so. Private tutoring in every subject matter on GSECE is running like a fever in the country.

The principle of equal opportunities is violated since university admission is based on applications GSECE scores which vary as shown previously due to factors other than students abilities. This suggest that university admission practices help sustain the inherited bias built in the system of secondary education and consequently in GSECE scores. Many concerned educators have voiced their firm objection to the predominant practice of basing admission to the university on GSECE scores alone. They advocate the stand that some exceptions are inevitable in order to compensate for the inequality of available school facilities and consequences of variations in students socioeconomic backgrounds. Recently, universities in Jordan started to admit students with relatively low GSECE scores as special students or students on probation. It is interesting to mention that those students are doing as well as regular students in terms of academic achievement (Jaradat et. al., 1984).

Some Neglected Uses of GSECE Data :

Current uses of data obtained from GSECE can be described as incomplete, ineffective and insufficient. The tremendous costly efforts, on the part of the Ministry of Education, invested in constructing, administering and reporting GSECE scores are not bringing forth the kind of expected returns. Other than using GSECE scores for admission to the university and for selection of candidates for scholarships, the huge body of data is left unused. The author is unaware of any form of processing GSECE data in order to be invested in proper context. Comparisons based on, school districts, socioeconomic backgrounds, sex, rural - urban, school facilities, school affiliation, teacher characteristics, etc. are but some of the analyses that could be made. Outcomes of these analyses can help to illuminate our understanding of the peculiarities of the system. Consequently, measures can be taken to offset the impact of certain factors and to reinforce others.

Diagnostic data could be obtained too. The critical thorough analysis of examinees performances in different subject matters comprising the exam might result in a large body of diagnostic data. Combined with data suggested in the preceeding paragraph, the system deficts can easily be identified and remedial proposals can be put forth and implemented. This would definitely reshape a great deal of educational practices in the country.

Holding public schools accountable for the performance of their students is not a common practice in Jordan. Therefore, it is not surprising to find noticeable differences in GSECE scores between students in private schools and students in public schools. Private schools have to compete with each others and with public ones in order to maintain their prestigous status in the country. It is very common to find that the number of those getting averages in the 90's in one private school exceeds the number of their counterparts in a whole school district. The author believes that schools and teachers alike should be responsible not only for the performance of their students on GSECE but for their overall school learning. Schools and teachers alike should stand to the committment of better learning for their clients. Such a committment should be concretely defined in order to introduce some form of accountability in the system.

Side Effects For the Long History of Administering GSECE

The purpose of administering GSECE repeatedly over the last fifty years might have resulted in a number of undesired side effects that could be summarized in the following.

1. The cultural overemphasis on high scores on GSECE has created what can be called a "a tenative spurous motivation". This spurous motivation yeilds a large

number of over achievers on GSECE. When over achievers join the university, a considerably different surrounding, motivation is back to normal and unrealistic expectations are hardly met. Consequently a large number of students are dropped from the university or put on probation, which adds considerably to the social cost of university education.

2. Private tutoring as well as teaching the exam are two flourishing trades in the market. The noble goals and objectives for education are left forgotten in the struggle for high scores. Piecemeal learning is fostered at the expense of meaningful learning.

3. Family anxiety, conflicts and fears are usually at their high time when a son or a daughter is sitting for GSECE. Parents are very concerned and ready to give all kind of promises in exchange of high scores on the test. After all high scores are the only assurance to be admitted to medicine or engineering at the university. If expectations are not met, disappointment and frustration emerge.

4. The unwarranted cultural belief in GSECE scores has produced a strange criterion where a person worth is judged by his performance on GSECE. A high achiever on GSECE is intelligent, able and worthy while a low achiever is not. Unfortunately, the media, intentional or otherwise, helps to sustain this belief.

A Final Note :

Tests have purposes and they should be designed to achieve these purposes. GSECE has no explicit purposes. Present uses of the test do not warrant its adoption. If the Ministry of Education believes in the need for tools that would provide necessary data for further improvements at the system of education in the country, these tools have to be built to accomplish such needs. The Ministry of Education should not be responsible for housing a test used improperly for higher education admission.

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